

II. Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-10 (canceled)

11. (withdrawn) A method of containing, reacting and measuring having: a containing step for containing in a transparent container, a base member of a long and slender shape such as a filament, a braid, or tape, with various substances for detection having predetermined chemical structures fixed thereto along a longitudinal direction with each of the chemical structures associated with their fixed positions; a reaction step for drawing a liquid suspending a labeled target substance to inside said container section and immersing said base member in said liquid to react said target substance with said substance for detection; a measurement preparation step for removing said liquid and any target substance which has not contributed to the reaction; and a measurement step for measuring light from the base member contained in said container section.

12. (withdrawn) A method of containing, reacting and measuring according to claim 11, wherein said measurement step scans all fixed positions of said base member by relatively moving said container section or a light receiving position.

13. (withdrawn) A method of containing, reacting and measuring according to claim 11, wherein in said measurement preparation step there is included a step for drawing measurement liquid after removing target substances which have not contributed to reaction and liquid suspending these, and said measurement step measures in a condition with said base member immersed in measurement liquid.

14. (withdrawn) A method of etc according to claim 11, wherein in said reaction step, said container section is shaken, or drawing and discharging is repeated.

15. (new) A device comprising:
a cylindrical structure having a longitudinal axis;
a plurality of detection substances each comprising a predetermined chemical structure; and
a base member to which each detection substance is fixed, the base member having:

an unrolled configuration in which:

the detection substances are arranged in a predetermined order along the longitudinal length of the base member; and

each pair of adjacent detection substances are spaced at a predetermined longitudinal spacing along the longitudinal length of the base member; and

a rolled configuration in which:

the base member is rolled around the cylindrical structure to define a plurality of circumferentially-extending rolls;

each pair of adjacent rolls in the plurality of circumferentially-extending rolls are spaced at a predetermined axial spacing along the longitudinal axis of the cylindrical structure;

each detection substance is exposed outwards and fixed to the base member at a predetermined fixed position relative to the outer surface of the cylindrical structure; and

each predetermined fixed position is defined by:

the predetermined order along the longitudinal length of the base member,

the predetermined longitudinal spacings along the longitudinal length of the base member, and

the predetermined axial spacings along the longitudinal axis of the cylindrical structure.

16. (new) The device of claim 15 wherein, when the base member is in the rolled configuration and exposed to a target substance, the predetermined chemical structure of at least one detection substance reacts with the target substance at the corresponding predetermined fixed position.

17. (new) The device of claim 16 wherein, when the base member is in the rolled configuration and exposed to a target substance, the predetermined chemical structure of at least one other detection substance reacts with the target substance at the corresponding predetermined fixed position; and

wherein the reactions at the corresponding predetermined fixed positions result in an identification pattern.

18. (new) The device of claim 15 further comprising:

a liquid in which at least a portion of the base member is immersed when the base member is in the rolled configuration; and

a target substance suspended in the liquid;

wherein the predetermined chemical structure of at least one detection substance reacts with the target substance at the corresponding predetermined fixed position.

19. (new) The device of claim 18 wherein the predetermined chemical structure of at least one other detection substance reacts with the target substance at the corresponding predetermined fixed position; and

wherein the reactions at the corresponding predetermined fixed positions result in an identification pattern.

20. (new) The device of claim 15 further comprising:

a tubular member wherein, when the base member is in the rolled configuration, the base member and the cylindrical structure are disposed in the tubular member; and

means connected to the tubular member for drawing liquid into the tubular member and discharging the liquid from the tubular member wherein at least one target

substance is suspended in the liquid and reacts with the detection substances at the corresponding predetermined fixed positions; and

means positioned outside of the tubular member for identifying the target substance after the target substance has reacted with the detection substances, the identifying means comprising:

means for irradiating excitation light through the wall of the tubular member; and

means for receiving emissions propagating through the wall of the tubular member and from the predetermined fixed positions in response to the excitation light.

21. (new) The device of claim 20 further comprising means for effecting relative movement between the receiving means and the tubular member.

22. (new) The device of claim 21 wherein the movement is translational and/or rotational.

23. (new) The device of claim 20 wherein the emissions are in the form of fluorescence.

24. (new) The device of claim 20 wherein the emissions are in the form of electromagnetic waves.

25. (new) A device comprising:
- a tubular member;
 - a base member disposed in the tubular member;
 - a plurality of detection substances fixed to the base member wherein each detection substance comprises a predetermined chemical structure and is fixed to the base member at a predetermined fixed position;
 - means connected to the tubular member for drawing liquid into the tubular member and discharging the liquid from the tubular member wherein at least one target substance is suspended in the liquid and reacts with the detection substances at the corresponding predetermined fixed positions; and
 - means positioned outside of the tubular member for identifying the target substance after the target substance has reacted with the detection substances, the identifying means comprising:
 - means for irradiating excitation light through the wall of the tubular member; and
 - means for receiving emissions propagating through the wall of the tubular member and from the predetermined fixed positions in response to the excitation light.
26. (new) The device of claim 25 further comprising means for effecting relative movement between the receiving means and the tubular member.
27. (new) The device of claim 26 wherein the movement is translational and/or rotational.

28. (new) The device of claim 25 further comprising a cylindrical structure having a longitudinal axis;

wherein the base member has:

an unrolled configuration in which:

the detection substances are arranged in a predetermined order along the longitudinal length of the base member; and

each pair of adjacent detection substances are spaced at a predetermined longitudinal spacing along the longitudinal length of the base member; and

a rolled configuration in which:

the base member is rolled around the cylindrical structure to define a plurality of circumferentially-extending rolls;

each pair of adjacent rolls in the plurality of circumferentially-extending rolls are spaced at a predetermined axial spacing along the longitudinal axis of the cylindrical structure;

the base member is disposed in the tubular member;

each detection substance is exposed outwards at the corresponding predetermined fixed position relative to the outer surface of the cylindrical structure; and

each predetermined fixed position is defined by:

the predetermined order along the longitudinal length of the base member,

the predetermined longitudinal spacings along the longitudinal length of the base member, and

the predetermined axial spacings along the longitudinal axis of the cylindrical structure.

29. (new) The device of claim 25 further comprising a core wherein the base member is spirally wound around the core.

30. (new) The device of claim 25 wherein the reactions at the corresponding predetermined fixed positions result in an identification pattern.
31. (new) The device of claim 25 wherein the emissions are in the form of fluorescence.
32. (new) The device of claim 25 wherein the emissions are in the form of chemiluminescence.
33. (new) The device of claim 25 wherein the emissions are in the form of electromagnetic waves.
34. (new) The device of claim 25 further comprising a light shielding box wherein the tubular member is disposed in the light shielding box.
35. (new) The device of claim 34 wherein the receiving means is disposed in the light shielding box.
36. (new) The device of claim 25 wherein the irradiating means comprises a light source.
37. (new) The device of claim 36 wherein the receiving means comprises at least one photodetector.
38. (new) The device of claim 37 further comprising at least one optical fiber connected to the light source and the photodetector.
39. (new) The device of claim 38 wherein the irradiating and the receiving occur simultaneously.

40. (new) The device of claim 38 further comprising:
at least one other optical fiber;
wherein the receiving means further comprises at least one other photodetector;
and
wherein the one other optical fiber is connected to the light source and the one other photodetector.
41. (new) The device of claim 40 further comprising a rod member spaced from the tubular member in a parallel relation wherein a tip section of each optical fiber is connected to the rod member.
42. (new) The device of claim 40 further comprising an annular member surrounding the tubular member wherein a tip section of each optical fiber is connected to the annular member.